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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,516	03/25/2005	Bernard Deckers	2497/104	2735

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EXAMINER

UHLENHAKE, JASON S

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/506,516	Applicant(s) DECKERS ET AL.	
	Examiner Jason Uhlenhake	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-12 and 14 is/are rejected.
- 7) ☒ Claim(s) 8 and 13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/9/2005</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

Claims 6-8, 12-14 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 7, 9 – 12, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cleary et al (U.S. Pat. 6,457,823) in view of Wu et al (U.S. Pub. 2002/0149659) and Carlson et al (U.S. Pat. 6,534,128).

Cleary et al discloses:

- **regarding claim 1**, applying a first ink drop to a substrate and subsequently applying a second ink drop on to the first ink drop without intermediate solidification of the first ink drop (Figure 4A, 4B; Column 4, Lines 24 – 51)
- **regarding claims 2 – 5, 10**, further ink drops are applied sequentially to the combined first and second ink drops without intermediate solidification of the first and subsequent ink drops; at least four ink drops are applied sequentially and wherein

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the first and subsequent ink drops are different colors; the ink drops are cyan, magenta, yellow, and black (Column 4, Lines 12 – 51)

- **regarding claim 14**, an ink dispenser (18) holding a set of ink jet inks

(Figure 1)

Cleary et al does not disclose expressly the following:

- **regarding claims 1 and 9**, the first and second ink drops have a different viscosity, surface tension or curing speed
- **regarding claims 6 and 11**, the viscosity of the first and last ink drops applied varies in a graduated manner within a range of from 10 up to 30 mPas or 30 down to 10 mPas
- **regarding claims 7 and 12**, the surface tension of the first and last ink drops applied varies in a graduated manner within a range of from 20 up to 40 dynes/cm or 40 down to 20 dynes/cm

Carlson et al discloses:

- **regarding claims 1 and 9**, the first and second ink drops have a different viscosity, surface tension or curing speed (Column 5, Lines 1 – 7), for the purpose of performing proper ejection of the ink, and improving the quality of the printed image.
- **regarding claims 7 and 12**, the surface tension of the first and last ink drops applied varies in a graduated manner within a range of from 20 up to 40 dynes/cm or 40 down to 20 dynes/cm (Column 5, Lines 1 – 7), for the purpose of performing proper ejection of the ink, and improving the quality of the printed image.

Wu et al discloses:

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- **regarding claims 6 and 11**, the viscosity of the first and last ink drops applied varies in a graduated manner within a range of from 10 up to 30 mPas or 30 down to 10 mPas (Paragraph 0004), for the purpose of improving the quality of the printed image.

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of the first and second ink drops have a different viscosity, surface tension or curing speed; the viscosity of the first and last ink drops applied varies in a graduated manner within a range of from 10 up to 30 mPas or 30 down to 10 mPas; the surface tension of the first and last ink drops applied varies in a graduated manner within a range of from 20 up to 40 dynes/cm or 40 down to 20 dynes/cm as taught by Carson et al and Wu et al into the device of Cleary et al. The motivation for doing so would have been to perform proper ejection of the ink, and improve the quality of the printed image.

Allowable Subject Matter

Claims 8 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The primary indication of allowable subject matter of claims 8 and 13 is the inclusion of the limitation of the cure speed of the first and last ink drops applied varies

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in a graduated manner within a range of from 20 up to 70 m/min or 70 down to 20 m/min. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

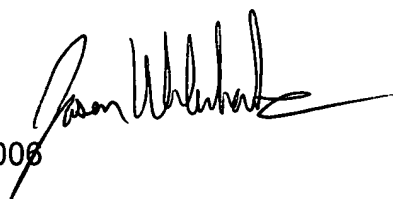
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Uhlenhake whose telephone number is (571) 272-5916. The examiner can normally be reached on Monday - Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSU
May 23, 2006


K. FEGANS
PRIMARY EXAMINER